

CLAIMS

1. Hydrodynamic torque converter, in which a clutch (3) is arranged ahead of a pump impeller wheel (2) and is connected to a drive mechanism, and in which a turbine rotor (7) forms the drive output, such that to determine the torque of the turbine rotor (7) a rotation speed of the turbine rotor (7) is detected by a speed sensor and transmitted to an electronic control unit, characterized in that a rotation speed of the pump impeller wheel (2) is transmitted by a speed sensor (13) to the electronic control unit.

2. Hydrodynamic torque converter according to claim 1, characterized in that the clutch can be operated with clutch slippage.

3. Hydrodynamic torque converter according to claim 1, characterized in that in the electronic control unit a performance matrix of the torque converter is stored, with reference to which, using the speed of the pump impeller wheel (2) and the speed of the turbine rotor (7), the electronic control unit determines the torque of the turbine rotor (7).

4. Hydrodynamic torque converter according to claim 1, characterized in that the rotation speed sensor (13) is arranged in a positionally fixed component which is in rotationally fixed connection with a stator (8) of the torque converter.

5. Hydrodynamic torque converter according to claim 1, characterized in that radially on the inside, the pump impeller wheel (2) has a flange (10) at the axial end of which means enabling the rotation speed to be detected are arranged.

6. Hydrodynamic torque converter according to claim 1, characterized in that the means enabling detection of the speed consist of cams arranged parallel to a rotation axis of the torque converter.

7. Hydrodynamic torque converter according to claim 1, characterized in that the sensor (13) for determining the speed of the pump impeller wheel (2) is arranged inside a converter housing (1), parallel to a rotation axis of the torque converter.

8. Hydrodynamic torque converter according to claim 1, characterized in that the sensor (13) for determining the speed of the pump impeller (2) is arranged at right-angles to a rotation axis (21) of the torque converter.

9. Hydrodynamic torque converter according to claim 1, characterized in that the sensor (13) for the speed of the pump impeller wheel (2) is arranged outside a converter housing (1).

10. Hydrodynamic torque converter according to claim 1, characterized in that the clutch (3) is arranged inside the converter housing (1) or inside a transmission housing (16) positioned after the torque converter.